

Software Development Tools

S1

IDEs

Revision Control

Using GitLab and Git

Integrated Development Environments

- A rich context for software development
 - Examples: Eclipse, IntelliJ, VisualStudio, XCode
- Syntax highlighting, continuous compilation, testing, debugging, packaging
- Powerful refactoring capabilities

Revision Control



- Indispensible software engineering tool
- Solitary work
 - Personal audit trail and time machine
 - Establish when bug was introduced
 - Fearlessly explore new ideas (roll back if no good)
- Teamwork
 - Concurrently develop
 - Share work coherently

Git

- Distributed version control system
 - hg, git, others (conceptually very similar)
- Contrast with centralized version control
 - cvs, svn, others

We will focus on distributed version control systems and not discuss centralized version control any further.

Git & GitLab

comp1110 / comp1110-labs

COMP1110 Lab 1

Purpose

The first lab is intended to ensure that you have become familiar with the basic tools we will be using throughout the semester in the labs at ANU and on your own computer (if you plan to use one).

It is essential that you complete this lab and have a tutor mark it off. We want you to do this now so that you can focus on course content from the first day of week two rather than be distracted by concerns over how the tools work. This is your chance to get yourself established and familiar with the tools with the assistance of the course tutors. Please make the most of the opportunity.

I have created a step-by-step video showing you how to complete this lab in the lab environment.

Tasks


1. Set up your GitLab account.

You will use GitLab throughout the semester to manage all of your coursework.

First you need to set up your GitLab account. Log in to a lab computer, open a browser, and go to GitLab <http://gitlab.occs.anu.edu.au>. Log in to GitLab using the LDAP tab of the Sign in section of the front page. You should type your student ID and your normal password.

Go to Profile Settings, which is accessible via a gear icon at top right. Feel free to update your GitLab personal profile if you wish.

This completes your GitLab setup.

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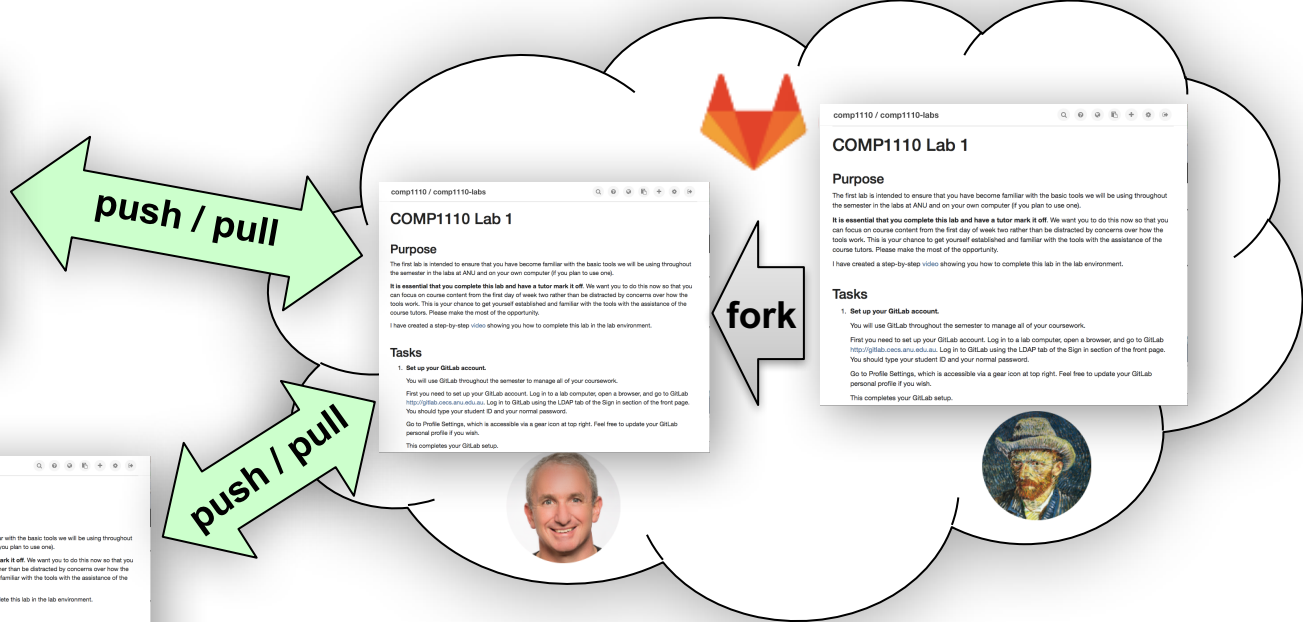
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IntelliJ Git Integration

- Create a new repository:
 - VCS->Import into Version Control->Create Git Repository...
- Clone an existing repository:
 - VCS->Checkout from Version Control->Git...
- Other operations:
 - VCS
 - VCS->Git
 - right mouse click -> Git